

Claim 7: The reticle according to claim 2, further comprising a cooling device.

Claim 8: An illumination equipment for microlithography comprising:

an illumination system, and

a reticle with magnesium fluoride as support material,

in which said illumination system provides radially polarized light and said magnesium fluoride is oriented with its crystal principal axis substantially in the direction of the optical axis at said reticle.

Claim 9: An illumination equipment for microlithography comprising:

an illumination system,

a reticle with support material of transparent optically uniaxial crystal,

in which said illumination system provides radially polarized light and said support material is oriented with its principal axis substantially in the direction of the optical axis at said reticle.

Claim 10: The illumination equipment according to claim 8 or 9 with a cooling device with a flowing fluid.

Claim 11: The reticle according to claim 18, further comprising a fluid cooling system.

Claim 13: The reticle according to claim 19, in which said flat plate comprises crystal.

Claim 14: The reticle according to claim 13, in which said crystal comprises one of CaF_2 and MgF_2 .

Claim 15 (Amended four times): A microlithographic reticle arrangement for use in a pellicle consisting of fluoride crystal.

Claim 16: The pellicle according to claim 15, comprising a fluoride selected from the group consisting of CaF_2 , BaF_2 , or MgF_2 .

Claim 17: A reticle with support material of transparent, optically uniaxial crystal, in which the principal axis of said crystal is oriented perpendicular $\pm 5^\circ$ to the surface of said reticle.

Claim 18: A reticle based on MgF_2 as support material, in which the principal axis of said MgF_2 is oriented perpendicular $\pm 5^\circ$ to the surface of said reticle.

Claim 19: An illumination equipment for microlithography comprising:
an illumination system,
a reticle with an optical axis and support material of transparent optically uniaxial crystal, wherein said illumination system provides radially polarized light and said support material is oriented with its principal axis substantially in the direction of said optical axis at said reticle,
further comprising at least one flat plate arranged parallel at said reticle, in which a fluid flows between said reticle and said at least one flat plate.